

Compact Crawler Machines

➤ Customized OEM solution for monitoring and motion control



➤ System Features

Customized OEM solution for monitoring and motion control of compact crawler machines



Monitoring

- Dynamic display of position, load, rated capacity and various operating modes
- Rated capacity limiter
- Overload protection system
- Outrigger monitoring
- Locking of operating modes (drive mode, crane mode & outriggers)
- Limits
- Cable winch monitoring



Motion Control

- Control of machine drive
- Outrigger setup
- Outrigger control
- Rotary movements of the machine
- Control of attachments, such as vacuum glass manipulators
- Operation of all movements via radio remote control
- Winch movements

➤ System Features

➤ Advantages

➤ Standards

➤ System Components



Service & Diagnostics

- Error diagnosis and display in plain text
- Password-protected service menu for machine start-up and service intervals
- User-friendly, icon-based menu on the console
- Guided sensor calibration and valve settings (currents and control curve) via touch display
- Display of inputs and outputs



Benefits for Operators Accuracy | Speed | Safety

- + Efficient, precise and intuitive machine use
- + Safe handling of the machine thanks to assisted-safety features
- + Reduction of downtimes



Benefits for Manufacturer Customization | Scalability | Cost-effectiveness

- + Configurable machine geometry and working areas for attachments
- + Simple parameterization options, e.g. for joystick sensitivity or valve flows
- + User-friendly settings via touch display without additional hardware



Standards

- CANopen CIA DS301
- Unified Diagnostic Services UDS ISO 14229
- System and hardware can be extended to meet functional safety requirements acc. to EN ISO 13849



CTL-S700: Controller

- For use in safety-critical applications (acc. to IEC/EN 61508:2015 SIL 2, EN ISO 13849:2015 PL d and EN 62061:2005 SIL 2)
- 32-Bit Tri-Core processor
- Up to 64 inputs and 56 outputs
- 4 CAN interfaces
- Programmable acc. to IEC 61131-3 with CODESYS 3.5 SIL 2



gSENS LWG 120: Draw-wire encoder with integrated inclination sensor

- Compact length/angle sensor
- Operating temperature: -40°C...+85°C
- Protection rating: IP66/67
- Communication: CANopen
- Power Supply: 8...36V DC
- Accuracy:
 - Length Accuracy: $\lt; \pm 0.5\% \text{FS}$
 - Angle Accuracy: $\lt; \pm 0.3^\circ$
- Measurement range:
 - Length: 0...15m (larger ranges possible on request)
 - Angle: -180°...+180°



vSCALE E2: Console

- 5" capacitive touch display
- Operating temperature: -30...+75°C
- EMC acc. to EN 50498, EN 13309 and EN ISO 14982
- Protection rating: IP66 acc. to ISO 20653
- Communication: CAN
- Power Supply: 8...36 VDC



pSENS MH-4-CAN: Pressure sensors

- Measures hydraulic pressure in the cylinders
- Operating temperature: -40°C...+100°C
- Protection rating: IP67 acc. to IEC 60529
- Communication: CANopen
- Power Supply: 9...35V DC
- Accuracy: Overall accuracy $\lt; \pm 1\%$ including non-linearity, air pressure, temperature
- Measurement range: 0...600 bar, larger scale on request

System Layout

